

## **401 KAR 61:035. Existing process gas streams.**

RELATES TO: KRS Chapter 224

STATUTORY AUTHORITY: KRS 224.10-100

NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100 requires the Environmental and Public Protection Cabinet to prescribe administrative regulations for the prevention, abatement, and control of air pollution. This administrative regulation provides for the control of emissions from existing process gas streams.

Section 1. Applicability. The provisions of this administrative regulation shall apply to each affected facility which means any process gas stream which:

- (1) Is not elsewhere subject to a standard of performance within this chapter with respect to hydrogen sulfide, sulfur dioxide, or carbon monoxide; and
- (2) Commenced before the classification date defined below.
- (3) The provisions of this administrative regulation shall apply to each affected facility which emits hydrogen sulfide or sulfur dioxide and is located in a county classified as Class I or VA with respect to sulfur dioxide in 401 KAR 50:025; or
- (4) Has a potential to emit more than 1,000 tons per year of carbon monoxide generated during the operation of any grey iron cupola, blast furnace, basic oxygen steel furnace, coal conversion plants, catalyst regeneration of a petroleum cracking system, or other petroleum process and is located in an area classified nonattainment with respect to carbon monoxide in 401 KAR 51:010.

Section 2. Definitions. As used in this administrative regulation, all terms not defined herein shall have the meaning given them in 401 KAR 50:010 or 401 KAR 50:025.

- (1) "Classification date" June 6, 1979.
- (2) "Process gas stream" means any gas stream emitted from any process, including, but not limited to, petroleum refineries, by-product coke plants, grey iron cupolas, blast furnaces, coal conversion plants and basic oxygen steel furnaces, except process upset gas as defined in this section and the combustion products of purchased coke oven gas.
- (3) "Process upset gas" means any gas generated by a process unit as a result of start-up, shut-down, upset, or malfunction.
- (4) "Process unit" means any segment of the plant in which a specific processing operation is conducted.

Section 3. Standard for Hydrogen Sulfide. No person shall cause, suffer, allow or permit the emission of hydrogen sulfide in a process gas stream to exceed ten (10) grains per 100 dscf (165 ppm by volume) at zero percent oxygen.

Section 4. Standard for Sulfur Dioxide. No person shall cause, suffer, allow or permit the emission of sulfur dioxide in a process gas stream to exceed 239 grains per 100 dscf (2,000 ppm by volume) at zero percent oxygen.

Section 5. Standard for Carbon Monoxide. No person shall cause, suffer, allow, or permit the emission of carbon monoxide in a process gas stream or a waste gas stream, unless the gases are burned at 1,300°F for five-tenths (0.5) second or greater in a direct flame afterburner or equivalent device equipped with an indicating pyrometer which is positioned in the working area at the operator's eye level.

Section 6. Test Methods and Procedures. Except as provided in 401 KAR 50:045, performance

tests used to demonstrate compliance with Sections 3 and 4 of this administrative regulation shall be conducted according to the following methods (filed by reference in 401 KAR 50:015):

(1) Reference Method 11 for hydrogen sulfide. The sample shall be drawn from a point near the centroid of the gas line. The minimum sampling time shall be ten (10) minutes and the minimum sample volume 0.01 dscm (0.35 dscf) for each sample. The arithmetic average of two (2) samples shall constitute one (1) run. Samples shall be taken at approximately one (1) hour intervals.

(2) Reference Method 6 for sulfur dioxide. Reference Method 1 shall be used for velocity traverses and Reference Method 2 for determining velocity and volumetric flow rate. The sampling site for determining SO<sub>2</sub> concentration by Reference Method 6 shall be the same as for determining the volumetric flow rate by Reference Method 2. The sampling point in the duct for determining SO<sub>2</sub> concentration by Reference Method 6 shall be at the centroid of the cross section or at a point no closer to the walls than one (1) m (thirty-nine (39) inches) if the cross-sectional area is five (5) square meters or more and the centroid is more than one (1) meter from the wall. The sample shall be extracted at a rate proportional to the gas velocity at the sampling point. The minimum sampling time shall be ten (10) minutes and the minimum sampling volume 0.01 dscm (0.35 dscf) for each sample. The arithmetic average of two (2) samples shall constitute one (1) run. Three (3) runs will constitute compliance test. Samples shall be taken at approximately one (1) hour intervals.

Section 7. Compliance Timetable. Those affected facilities subject to the standards in this administrative regulation shall achieve compliance with those standards within eighteen (18) months of June 6, 1979.

(1) Hydrogen sulfide and sulfur dioxide. The provisions of Sections 3 and 4 of this administrative regulation are applicable on June 6, 1979 with respect to affected facilities located in counties classified as Class I with respect to sulfur dioxide. The owner or operator of an affected facility located in a Class VA county with respect to sulfur dioxide shall be required to complete the following:

(a) Submit a final control plan for achieving compliance with Sections 3 and 4 of this administrative regulation no later than September 1, 1979.

(b) Award the control system contract no later than October 1, 1979.

(c) Initiate on-site construction or installation of emission control equipment no later than September 1, 1980.

(d) On-site construction or installation of emission control equipment shall be completed no later than December 1, 1980.

(e) Final compliance shall be achieved no later than February 1, 1981.

(2) Carbon monoxide. The owner or operator of an affected facility shall be required to complete the following:

(a) Submit a final control plan for achieving compliance with Section 5 of this administrative regulation no later than September 1, 1979.

(b) Award the control system contract no later than October 1, 1979.

(c) Initiate on-site construction or installation of emission control equipment no later than July 1, 1980.

(d) On-site construction or installation of emission control equipment shall be completed no later than October 1, 1980.

(e) Final compliance shall be achieved no later than December 1, 1980. (5 Ky.R. 479; Am. 1052; eff. 6-6-1979; 8 Ky.R. 518; 884; eff. 4-7-1982; TAm eff. 8-9-2007.)